## WHAT IS CLAIMED IS:

Sub A' ILISTION

A turbulator with offset louvers for a heat exchanger comprising:

a purality of corrugated fins each having a base extending laterally and longitudinally in a strip; and

a plurality of offset louvers spaced along said base and extending longitudinally and generally perpendicular to said base in an alternating manner, said offset louvers being rolled in a direction parallel to a longitudinal axis of said strip.

2. A turbulator as set forth in claim 1 wherein said offset louvers extend longitudinally a predetermined distance.

3. A turbulator as set forth in claim 1 wherein said offset louvers are spaced laterally a predetermined distance along said base.

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4. A turbulator as set forth in claim 1 wherein said louvers extend generally perpendicular to said base a predetermined distance.

A turbulator as set forth in claim 1 wherein said offset louvers have a generally inverted "U" crosssectional shape.

6. A heat exchanger comprising:
a first manifold;

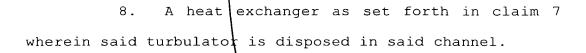
a second mahifold spaced from and opposing said first manifold;

a plurality of tubes extending laterally between 10 and in fluid communication with said first manifold and said second manifold; and

a plurality of turbulators, each of turbulators having a plutality of louvers spaced laterally and extending longitudinally in an alternating manner, said louvers being rolled in a direction parallel to a longitudinal axis thereof lone of said turbulators being disposed in one of said tubes.

7. A heat exchanger as set forth in claim 6 20 wherein said tube comprises a base, a top spaced from and opposing said base, a first side interposed between said base and said top along one side thereof, and a second side interposed between said base \and said top along another side thereof, said base and said top and said first side 25 and said second side forming a channel.

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- 9. A heat exchanger as set forth in claim 6 wherein said turbulator comprises a plurality of corrugated fins each having a generally planar base extending longitudinally and said louvers spaced laterally and extending longitudinally along said base.
  - 10. A heat exchanger as set forth in claim 9 wherein said louvers extend generally perpendicular to said base a predetermined distance.

extending laterally and longitudinally;

forming a plurality of corrugated fins each
having having a plurality of offset louvers spaced along
the base and extending generally perpendicular to the base
in an alternating manner such that the offset louvers
extend in a direction parallel to a longitudinal axis of
the strip.

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- 12. A method as set forth in claim 11 wherein said step of forming comprises roll forming.
- 13. A method as set forth in claim 11 including

  5 the step of providing a pair of rollers and feeding the strip in a direction of rotation of the rollers to form the louvers.
- 14. A method as set forth in claim 11 wherein said step of forming domprises forming a planar portion laterally between the louvers.
- 15. A method as set forth in claim 11 wherein said step of forming comprises forming the louvers with a generally inverted "U" cross-sectional shape.
  - $9^{4}$   $9^{40.049}$  16. A method of making a heat exchanger comprising the steps of:

providing a plurality of tubes;

providing a generally planar strip having a base extending laterally and longitudinally;

forming a plurality of turbulators each having a plurality of corrugated fins with a plurality of louvers spaced laterally and extending generally perpendicular in

an alternating manner such that the louvers extend in a direction parallel to a longitudinal axis of the strip; disposing the turbulator in the tube; and brazing the tube and the turbulator together.

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- 17. A method as set forth in claim 16 wherein said step of forming comprises roll forming.
- 18. A method as set forth in claim 17 including

  10 the step of providing a pair of rollers and feeding the strip in a direction of rotation of the rollers to form the louvers.
- 19. A method as set forth in claim 17 wherein said step of forming comprises forming a planar portion laterally between the louvers.
- 20. A method as set forth in claim 17 wherein said step of forming comprises forming the louvers with a generally inverted "U" cross-sectional shape.